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ABSTRACT

Information concerning characteristics of California and its educational system are presented, with attention to population trends, the proportion of ethnic residents, the age distribution, median family income, the economy, school enrollments and completion rates, and college attendance and graduation. Notable findings/conclusions include: 15% of Californians were born in another country; many of California's children are born into poverty, into homes where no English is spoken, or without two caring parents; a majority of Californians will be Black, Asian-American, Native American, and Hispanic shortly after the year 2000; public school quality, as measured by achievement test scores, has dropped during more than a decade, as have most measures of school funding; the quality of California higher education is affected by the quality of the public schools; the three levels of California higher education (community college, state university, University of California) are not currently functioning to increase the participation of minority groups in higher education, particularly in terms of the transfer function from one level to the next; the state needs to pay more attention to the entire educational system and how each level affects the others; particularly important are preschool and junior high, as well as the transfer function in higher education. (SW)

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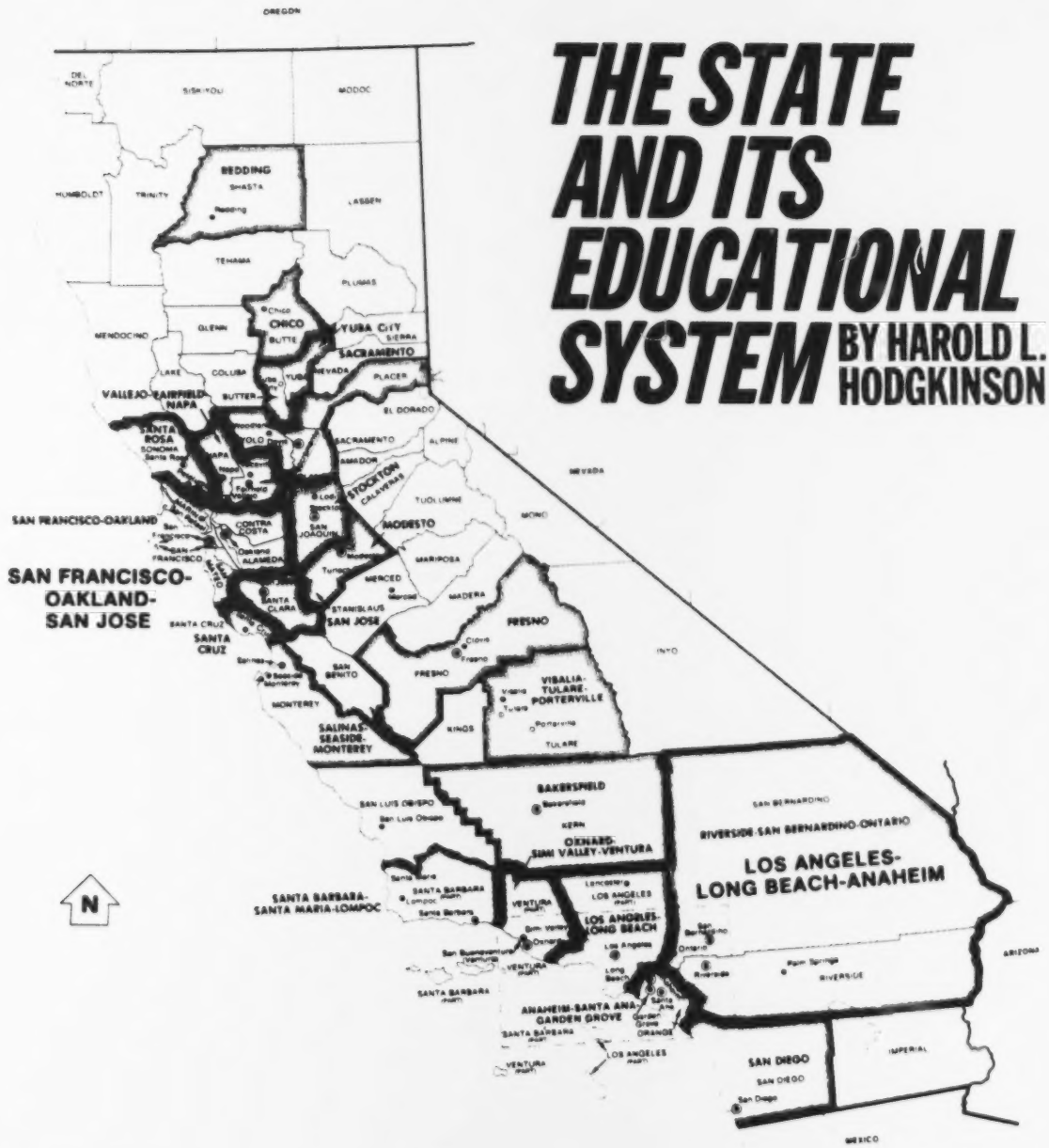
CALIFORNIA:

THE STATE AND ITS EDUCATIONAL SYSTEM

BY HAROLD L. HODGKINSON



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CALIFORNIA:
THE STATE AND ITS EDUCATIONAL SYSTEM

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The report brings together a wide range of materials having to do with California. This diversity could not have been accomplished without a computer program called Super-File, which has been a joy to use. The author's gratitude goes to FYI, Incorporated and the geniuses who made it possible.

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Errors of fact and interpretation, however, remain the responsibility of the author.

Harold L. Hodgkinson
American Council on Education
Washington, DC

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Cover Note:
This most unusual map of California shows how the state looks demographically. California is the most urban state in the U.S.—*95%* of its 23 million people live in its 21 metropolitan areas. In thinking about California's future, these areas are the social equals of mountains, rivers and roads on conventional maps. "People Maps" like this one become increasingly important tools for politicians and marketers of products and services.

CALIFORNIA: THE STATE AND ITS EDUCATIONAL SYSTEM

The fact is that one of every nine Americans is a Californian. It would take the population of 60 Alaskas to make one California. The 1982 population of 24,628,000 will move to around 30 million by the year 2000. If California were a nation, it would be one of the ten most powerful in the world on almost any measure. Our population now lives mostly in the East of the country: 50% in the Eastern Time Zone, 30% in Central, only 5% in Mountain, and 14% in Western, almost all of that being California.

With the current uncertainties about Texas, and given the fact that in-migration to that state virtually halted at the end of 1985 due to the state's overwhelming dependence on world oil prices, California, with its diversified economy and population, looks like the state to watch in terms of overall growth. It already represents in human terms what New York did at the turn of the Century—the point of entry for millions who immigrate to the U.S. Two-thirds of the *world's* immigration is to the U.S., which means that California is now accepting almost one-third of the world's immigration, and immigration rates are on the increase. Of course, Texas is still admitting immigrants in large numbers, as is Florida, but the largest number and the greatest cultural diversity will continue to come to California.

As Asian nations continue on their paths to economic and social development, California becomes a natural linkage point for Asian and South American nations just as New York was in the 20's for Europe. The only difference is that when Europeans were migrating to New York, that was the only source of population increase. California is getting both immigration from Asia and South America AND from Indiana and Michigan. Nation-building was the theme for almost everyone immigrating to New York in the 1920's (from Europe); it seems unlikely that most Americans moving from Indiana and Michigan to California are doing so to build a new nation. Indeed, certain U.S. citizens moving to California may represent more of a cultural clash than some folk moving there from Asia or South America. It is our tolerance for diversity which allows us to tap the energies of each new group coming to America to seek a better life, and California does this well.

To get some sense of the size and diversity of the state, let's take a look at the 1980 Census numbers for California, realizing that some of these will be changed in the Census update for 1985:

CALIFORNIA PROFILE

1980 POPULATION:	1st (23,667,000)
BLACK POPULATION:	2nd (1,819,000)
PERCENT BLACK:	21st (7.7%)
HISPANIC POPULATION:	1st (4,544,000)
PERCENT HISPANIC:	3rd (19.2%)
FOREIGN BORN:	1st (15.1%)
PERCENT OVER 65:	34th (10.2%)
PERCENT UNDER 18:	43rd (27%)
MEDIAN AGE:	22nd (29.9 Years)
WOMEN IN LABOR FORCE:	13th (52.4%)
COLLEGE GRADUATES:	8th (19.6%)
MARRIED—COUPLE HOUSEHOLDS:	49th (55.2%)
OWNER—OCCUPIED HOUSING:	48th (55.9%)
MEDIAN HOUSEHOLD INCOME:	10th ($18,243)
HOUSING VALUE:	2nd ($98,700)

This table gives us some picture of the ethnic and socio-economic diversity of California. It is the quintessential Baby-Boom state—very few old and very few young. This means that more workers will be moving into their peak earning years in the next decade, a positive factor in terms of taxes and purchasing power, particularly if the California economy can generate the promotions and new jobs that will be needed. It is also easy to see that the Baby Boomer Californians are delaying long-term commitments to marriage and family, as seen in the small percentage of married-couple households and owner-occupied housing. An educated guess would be that California has more "singles," age 30-40, than any other state. This also helps to explain the *very* low birth rate in California—if it were not for immigration (from other countries) and in-migration (from other states), the California population would actually be decreasing. Fifteen percent of California's population was born in another *country* while 55% was born in another *state*.

The increase in youth entering the early grades of school in 1986 reflects a *small* increase in Baby Boomer births (the so-called Yuppie Puppies), but mainly an increase in high fertility immigrant groups in the state. (The birth rate for whites in the U.S. is now 1.7 children per female, the Hispanic is 2.8. During the Baby Boom, white birth rates went to 3.5 children per female. The problem is a major drop in white fertility, characteristic of California, the U.S., as well as all Western nations—West Germany is now below 1.3. You need 2.1 children just to stay even.)

There are two million children under the age of five in California. A majority of them are non-white, and live in the southern half of the state, where Los Angeles is currently hiring 2,500 new teachers. The Southern California Gas Company—the nation's largest—can tell you how to hook up a gas stove in Chinese, (either Mandarin or Cantonese) Spanish, Korean, Vietnamese and English, all in their *13 million person* service area! Only fifteen percent of Los Angeles school children are caucasian.

Household income is very high considering the diversity of the population. This income level has been created by several factors, particularly the large number of women in the workforce (and two incomes are almost mandatory for a middle-class lifestyle these days), the small number of older people who no longer work, as well as the very large number of people who have directly benefitted from a college degree.

Unlike Colorado, the #1 state in terms of the percentage of population with a college degree, a large number of degree-holders in California earned their degrees in their own state. Colorado is a "net gain" state, in that a large number of their degree-holders earned their degrees in Indiana or Ohio and then moved to Boulder—Ohio pays the bill for the education, and Colorado gets the benefit. In California, a large percentage of the adults with degrees are graduates of the unusually well-developed California system of higher education. Only 6 to 7% of high school graduates in California go out of the state to study—almost 40% do in New Jersey and Connecticut.

In terms of U.S. citizens moving to California, the data from 1975-1980 provide a striking demonstration of the "minority majority" soon to come in the California population:

CALIFORNIA MIGRATION 1975–1980

	ALL	WHITE	HISPANIC	BLACK
IN:	2,898,992	2,010,327	545,906	197,541
OUT:	1,782,831	1,565,038	139,357	100,188
NET:	1,116,161	445,289	406,549	97,353

Some aspects of this chart are very interesting. First, for every 10 whites who move to California about 8 whites leave. For every 10 Hispanics who move in, only 2.5 leave, and for every 10 blacks who move in, 5 move on. The state's future is composed of those who stay, a group remarkably non-white, younger than the white population and much more likely to have children. While the average U.S. white is 31 years old, the average black is 25, the average Hispanic is 22. Birth rates naturally increase the most for the youngest population with the largest number of females in the peak child-producing years.

While 445,289 whites were the "net" addition to California during this five-year period, 503,902 minorities were added. Add to this the current Chicano fertility rate of 2.9 children per female and the white birth rate of 1.7 children per female and the future becomes even clearer, both with in-migration and fertility. Note that this table includes only data on U.S. citizens. If one were to add resident Asian-Americans (a very rapid increase from 3 million in 1980 to 5 million in 1985, predicted at 10 million by 2000) and recent legal immigration, the numbers would be even more suggestive.

Of the current U.S. Asian-American population of 5 million, 1/3, or 1.65 million, live in California. In 1979, all immigrants coming to the U.S. were asked where they intended to establish residence, with California the most popular state (118,000), followed by New York (94,401), Texas (30,520), Florida (26,887), New Jersey (26,465) and Illinois (19,497). Of this entire pool of U.S. immigrants in 1979, 13.2% were from Europe, 41.1% from Asia, 41.9% from Latin America, and only 2.8% from Africa, with about 1% "other."

In the cases of Latin America and Asia, the immigrants are coming from a wider variety of nations, each with distinct cultures. Here is the breakdown for the U.S. Asian-American population as of 1985, when their total numbers were estimated at 5 million but only 3.7 million could be counted:

ASIAN-AMERICAN POPULATION 1985

CHINESE	806,000
FILIPINO	775,000
JAPANESE	701,000
ASIAN INDIAN	362,000
KOREAN	355,000
VIETNAMESE	262,000
HAWAIIANS	167,000
SAMOANS	42,000
GUAMIANS	32,000

It should be clear that these nations do not necessarily enjoy close cultural bonds with each other, and resent being lumped together as "Asians." Similarly, Puerto Ricans, 50% of all Hispanic immigrants to the U.S. in the 1950's, are only 3% today, while Mexicans are 41% of Hispanic immigration and Cubans are 20%. The rest are spread across 16 Latin American nations, including Equador, Dominican Republic, Columbia, Argentina, and more recently Nicaragua and El Salvador. These nations are also not grateful for the label "Hispanic" for the same reasons.

One other point needs to be made about the Asian-American population. According to a Census report on

income by state, the California median family income looked like this in 1983:

CALIFORNIA MEDIAN FAMILY INCOME, 1983

JAPANESE	$27,388
CHINESE	24,409
ASIAN INDIANS	23,722
FILIPINO	23,586
WHITE	22,754
KOREAN	20,713
HISPANICS (ALL)	16,087
BLACK	14,887
VIETNAMESE	11,852

We are not used to thinking about minority groups that make *this* much money! There are several answers—Asian-Americans average three workers per family, about 1/3 of them have a college degree, etc. Even so, Asian-Americans have clearly learned a lesson—hard work pays off in America. Hispanics and blacks also work hard, but they have not yet learned to use education as effectively as have most Asian-Americans.

Not included in our chart are the illegal immigrants to California. The 1980 Census counted two million illegal immigrants, about half from Mexico. The uncounted illegals can be more accurately estimated now than in the 1980 Census, when estimates ranged up to 10 million. There are between 3.5 and 4 million illegals in the U.S. today, according to *American Demographics*, March, 1986. Three-fourths of the illegals live in 12 metro areas, six of which are in California, and only two of which (San Francisco-Oakland and San Jose) are in the Northern half of the state. Adding the 4 million illegals to the legal total of 14 million gives us a current total of 18 million immigrants in the U.S. Although there is some disagreement on whether illegals take jobs away from U.S. citizens, the overwhelming evidence in 1986 suggests that this does not happen. Illegals generally contribute more to the economy than they take away. The only exception is that their children must be educated in America's public schools, creating a major financial drain on the California, Texas and Florida public schools. The number of illegals who "convert" is not known.

In terms of crime, the state does very well, being 6th in murder rate (14.3 per 100,000 population), 3rd in rape (58.2 per 100,000) and 4th in robbery (384 robberies per 100,0000). California's big cities have a far higher crime rate than the state's average, as the table below showing California's 4 largest cities compared to the rest of the 25 largest cities in 1980, will indicate:

CRIME RATE PER 100,000

	MURDER	RAPE	ROBBERY
LOS ANGELES	7th (34.2)	9th (95.3)	9th (868.3)
SAN FRANCISCO	17th (16.3)	5th (1126)	8th (1116.5)
SAN DIEGO	23rd (11.8)	24th (41.4)	20th (341.3)
SAN JOSE	25th (9.9)	15th (76.3)	24th (272.9)

While the state had a murder rate of 14.3 per 100,000 people, Los Angeles had a rate of 34.2. (St. Louis is now the #1 city for murder, edging out both Cleveland and Detroit.) The state had 384 robberies on average while San Francisco had 1116 per 100,000. (One could infer that virtually everyone in San Francisco makes enough money to make them worth robbing. Criminals are not stupid.)

Particularly interesting is that the state has a very high crime rate, but a very low rate of prisoners per 100,000 population. California ranks 26th in prisoners at 107 per 100,000, compared to North Carolina's #1 score of 256 and New Hampshire's low of 39. The answer to the discrepancy is a mystery—the state ranks 6th, 3rd and 4th on the three major crimes, yet is 26th on prisoners. It may be sheer size—although the rank is low, California had 27,792 prisoners in 1981, and that's a lot of jail space. Why should California be high on crime and low on prisoners while North Carolina is low on crime and #1 on prisoners?

At a more minor criminal level, the state ranks 5th on the percentage of drivers who drive over 55 m.p.h. (61% of California drivers do, while only 27% of Maryland drivers do. Apparently police watch us from airplanes even when they don't arrest us, and the numbers are quite reliable.) Even with all this speeding, California drops to 19th in traffic fatalities per mile, due largely to the excellent highway safety engineering in the state. It may also be that when gridlock happens on the freeway and nothing with four wheels is moving, it's pretty safe in the car.

As one measure of public citizenship, California ranks 44th in the percentage of voters who actually voted in the 1980 and '84 national elections, averaging 53% of California eligible voters who actually went to the polls. Given the high income and high levels of education in the state, plus relative ease of transportation to the polls, this is somewhat surprising. It may be that Californians aren't that concerned about national politics, or there may be other explanations.

Turning to other issues, the state ranks 5th in abortions per 1,000 live births. For every 1,000 births in California there were 515 abortions. New York leads in this category with 666 abortions per every 1,000 live births, while Mississippi has 96 abortions per 1,000 births. The demographic consequences of this variation are striking indeed. Regardless of the ethical issues surrounding abortion, it is clear that in Mississippi a large number of children are born "at risk"—in poverty, or to teen-age mothers or out of wedlock. A large number of these children will be dependent on state and federal support for most of their lives, drawing money away from other state purposes. The economy of California would be much different if it had the Mississippi ratios; however, we have here at least part of the answer to California's very low birth rate, particularly for whites.

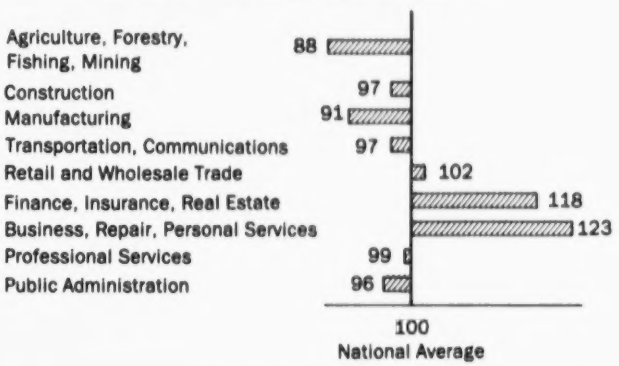
Divorce rates in California are also high—the state ranks 7th, with 615 divorces per every 1,000 marriages. One of the reasons the figure is so much above the national norm of 490 divorces is that there are so many Baby Boomers in California.

The state's rate of venereal disease is also high—7th for syphilis (19.6 cases per 100,000 population), and 13th for gonorrhea (554.7 cases). San Francisco is #1 in syphilis at 153.2 cases per 100,000, and #2 in gonorrhea, a much less serious disease, at 2,810 cases. Atlanta leads in gonorrhea with an astonishing 3,114 cases per 100,000, and is second to San Francisco in syphilis with 138. Other California major cities are much lower on gonorrhea—Los Angeles has 739 and San Diego 400 to San Francisco's 2,810. Data on other social diseases like AIDS are not contained in the 1980 Census, but it would appear that California's case rates for AIDS would also be among the highest in the nation. There are important policy implications behind data like this, but many state leaders would rather talk about the good things and hope that social diseases will go away.

Another clue to these high rates of social diseases is the fact that California is the most "citified" of states—95% of its population live in its 21 metropolitan areas. The largest is, of course, Los Angeles—Long Beach—Anaheim, 7.5 million in the 1980 Census, second only to New York metro with 9.1 million. Santa Cruz was the fast-growing metro area in the 70's with a 52 percent growth rate, while San Francisco was the slowest of the 21 metro areas with a 5% growth rate during the 70's. One way of thinking about urban density is to look at commuter airline schedules—although Easterners think New York-Washington is the most frequent link, and Californians assume it's San Francisco-Los Angeles, they are both wrong. In December, 1980, the most frequently flown route in the U.S. was Dallas—Houston, with 3,462 flights.

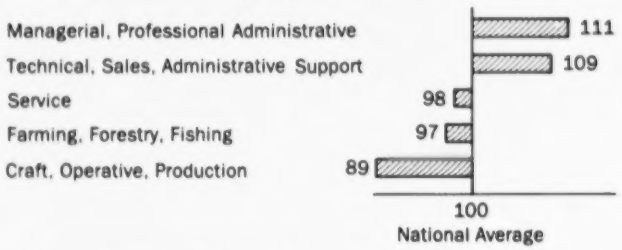
The economy of the state is remarkably diverse, allowing it to ride through recessions that seriously injured states like Michigan, and through rapid fluctuations in oil and gas prices, which have brought growth in Oklahoma and Texas almost to a standstill in 1986. This diversity holds for both occupational categories (what workers do) and industrial categories (what companies and organizations produce). The industrial distribution is remarkably consistent across the categories, with no major weaknesses. In the following distribution, 100 represents the national average in 1980 for that category of industry:

CALIFORNIA INDUSTRY, 1980



Not even New York State can compete with that remarkably high level of consistency. It is the major reason for the state's great economic stability even when the U.S. economy looks like 4.8 on the Richter Scale. When California's $14 billion agricultural economy is in difficulty, it is balanced by its $28 billion defense contract economy. This is not to say that the state is free of economic worries; only that in times of trouble you are better off with a lot of arrows in your quiver than with just one or two.

The workforce is equally diversified:



A word needs to be said about California as the "high tech" center of the U.S. Although the definition is somewhat tricky, California has 22% of the nation's publicly-owned high tech corporations, while 35% are in the Northeast, the largest regional concentration. There are important differences between Silicon Valley high tech and that of Route 128 in Boston. Silicon Valley is more involved in manufacturing (205,000 jobs compared to 152,000 on Route 128). But interestingly enough, the number of jobs in programming and software development in Boston is much higher—25,000 compared to 6,000 in Silicon Valley. As high tech manufacturing becomes more automated (the Apple "Mac" plant in Fremont, California, is a good example—a computer comes off the line every 14 seconds with fewer than 100 workers on the line), jobless growth will be the result in high tech manufacturing just as in autos and farming.

There are also some parallels between the two areas—in both cases, a first-class university engineering school was at the core: Stanford and MIT. Although venture capital seems to ooze out of the ground in both sites, both are plagued with very high housing costs, in Santa Clara as well as Lexington, Mass. It is a transient field, with many workers changing job titles three or more times every year. High tech companies have very high divorce rates on both coasts. In Boston, high tech simply rebuilt the previous manufacturing enterprises, sometimes even locating in old mill plants, while in Santa Clara there was nothing there to rebuild. This may be part of the almost religious fervor with which Californians speak of high tech, while Bostonians see it as just one more among *many* things that comprise their culture.

As long as companies like IBM, Bell Labs and GE concentrate in places like New Jersey, New York and Massachusetts, and virtually every state has at least one major center of high technology, we will again be better off through differentiation and pluralism. It is interesting that the Japanese, known as the "Big Dragon," as well as the "Little Dragons" of Hong Kong, Taiwan, Korea

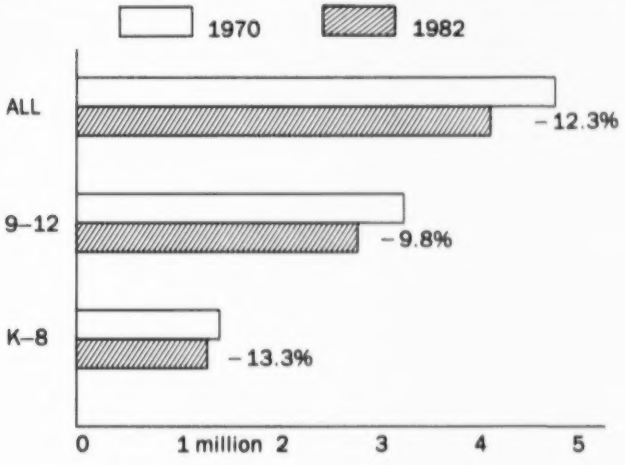
and Singapore, who are so good at so much of high technology, have not been able to develop their own "Silicon Valley—128." Even the direct imitation of Silicon Valley by Taiwan's Hsinchu Industrial Park, located 70 kilometers from Taipei, as well as the Science Park in Singapore, are not very good at the entrepreneurship of ideas.

One of the reasons for the American's success in this venture is that universities and corporations can collaborate with little government interference. In Japan and the Pacific Rim "Little Dragons," little is done without the government, which can be very useful in *production* innovations. However, new ideas of a more generic sort often come from individuals and small groups "fooling around"—an activity which few governments appreciate. (Indeed, one of the major motivations of innovators may be the desire to get around governments.)

Having dealt with a few conditions affecting this large and complex state, let's look more directly at the educational system in California, beginning with the public schools. To get a sense of the magnitude of the venture, the following shows numbers enrolled in the schools through time:

CALIFORNIA SCHOOL ENROLLMENTS:

	1970	1982	NET	U.S.
ALL	4,633,000	4,065,000	-12.3%	-13.6%
GRADES 9-12	1,402,000	1,264,000	-9.8%	-6.2%
GRADES K-8	3,231,000	2,802,000	-13.3%	-16.7%



These numbers are large, and represent rapidly increasing ethnic and cultural diversity as well—public school students in California were only 27.3% minority in 1970 to 42.9% minority in 1980, a 15% increase in one decade. The numbers also mask a major increase in pupils in the early elementary grades. Today, California's elementary schools (tomorrow's college students can be found there today) have a minority majority in the first three grades. These children will grow older (a simple but useful skill) creating a minority majority in all public school enrollments by 1990. This is because high school enrollments will continue to decline even as the heavily minority elementary school populations increase rapidly.

Although all of the 28 largest U.S. cities now have a minority of whites, the data for Los Angeles is particularly striking: non-Hispanic whites are only 15% of the early elementary enrollment while Hispanics are 60%, blacks are 16%, and Asians are about 4% as of Fall, 1985. Total enrollment in the Los Angeles public schools is 547,233 for Fall '85, larger by far than the *combined* total enrollments of the University of California (147,500 students in 1985) and the former state college system, now titled California State University (325,000 students). By 1990, a population as large as the Los Angeles school system will be added to the enrollment in California public schools. It will be even more diverse ethnically than the current school population.

The strategic problem the state confronts is something like this:

- Quality in the public schools, as measured by achievement tests, has been declining for more than a decade, as has funding.
- Although the data for drop-outs are not perfect, California ranks about 40th in retaining young people to high school graduation. For a state that is 8th in college graduates and very high in per capita income, the performance is very bad. In 1976 about 76% of kids graduated from high school, 68% did in 1981.
- The rapid increase of half a million students in the schools by 1990 contains a disproportionately large number who do not speak English, are below the poverty line, and have physical and emotional handicaps. The state will have to spend more and do better just to stay even.
- California has the largest class sizes in the nation. Lowering the size of classes is the most expensive task imaginable.
- Recruiting teachers with the diversity of skills necessary to teach this very diverse and growing student body will be very difficult, even with the high level of California teacher salaries.
- Senate Bill 813 and other education reforms of 1982-83 will tighten up curricula, attempt to reduce drop-outs, and increase standards for admission to higher education. Meaningful results of this action will take almost a decade to appear.
- Additional moneys will flow toward the schools, but the largest systems in California will find the increases eaten up by expanding numbers of students to be served.
- It is very difficult to increase state ranks during a time when other states are also raising their levels of educational effort.
- The state seems committed to a Brooks Brothers system of higher education for students prepared in Robert Hall schools.

The issues of California higher education need to be seen in this kind of a context. The tripartite system of higher education envisioned by the California Master Plan in 1960 was a major development in American higher education in terms of access and choice, as well as quality and cost. Today, the three building blocks look like this:

1. The University of California, now 9 campuses and 147,000 students, is known throughout the world.
2. The California State University educates 325,000 students on its 19 campuses.
3. The California Community Colleges, now educating 1.1 million students on 106 campuses, represent a unique resource, often imitated by other states and seldom appreciated by Sacramento.

The genuis of the Plan was the notion that ability and motivation would be the major factors sought by the system—that race, class, parent's education, sex, even age, would be diminished as predictors of access and success in the higher education system. The dream remains a viable one, but after more than 20 years of the 1960 Plan we must look at the reality as well. It is clear today that race, socio-economic class, and a host of other factors are all of major importance in terms of who participates in higher education, and at what level. One of the things the Master Plan did not foresee was pointed out nicely by David Saxon when he left the Presidency of the University of California in 1983:

> ***By the end of this Century, California is likely to become the first state in the nation whose population is made up predominantly of members of minority groups . . . Intelligent self-interest, the welfare of the nation and justice all demand that we do something to make sure that the young people of the state are qualified for an education at the University of California.***

With one little quibble (Hawaii has had a minority majority for some years now), Saxon's comment is prescient, to say the least. The Master Plan anticipated neither a decade of declining performance in California schools nor a major change in the composition of school populations. What is now entering the early elementary school years is a population that will require additional effort just to stay even with contemporary achievement levels. That additional effort is clearly seen in Senate Bill 813: tightening standards alone will solve nothing until all students have an equal chance of *accomplishing* these higher goals. New organizations like the California Achievement Council are beginning to make some major contributions to our knowledge of how to do this.

In the author's previous work entitled *All One System*, three key decision points were developed for the analysis of the national educational system, and they will be applied to California in this report. They are:

1. The percentage of young people who graduate from high school and become college eligible.
2. The number (and percentage) of those high school graduates who choose to enter college at some level.
3. The number of those entering higher education who complete the programs they start, and those that transfer to other institutions.

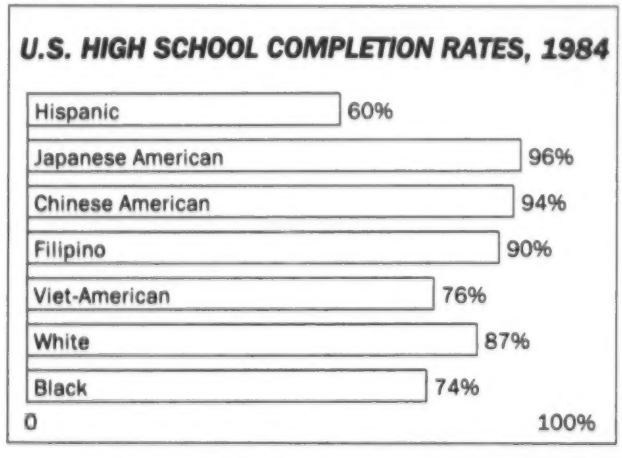
First, it is clear that California has a serious problem in retaining youth to high school graduation. The ethnic and national diversity of the student body is only one part of the problem—students from different countries and backgrounds need individualized attention more than most students, yet California has the largest class size of any state in the nation: 24 students in elementary school classes, 28 in high school classes against a national average of about 18 students. This is the most important single factor in the California equation.

Increased student diversity clearly demands *smaller* classes, not bigger ones. It is very clear that student diversity in California will be greater in the future. It is not humanly possible to teach 30 students in any class at any age if the students speak four different languages not including English. Such classes exist now in California. Even with the current class size, California is facing a major teacher shortage.

To reduce class size to the national average of 18 students, the number of new teachers in the state would have to be doubled, from the California Commission on the Teaching Profession's estimate of 85,000 to about 160,000 new teachers by the end of this decade. The cost of any such venture would be $4 billion dollars annually in teachers' salaries alone (160,000 teachers at $25,000 a year). Additional classroom construction for 160,000 new teachers would build to an incomprehensible figure. Year-round schools and double sessions are only band-aid solutions.

It is against this background that we should consider the figures from the (excellent) *Director's Report of the California Postsecondary Education Commission* for December, 1985:

- One quarter of California's ninth graders do not graduate with their class. The drop-out rate for black and Hispanic youth is 50% higher than for whites. The tracking system in America's public schools ends up with a disproportionate number of poor and minority students in the non-academic tracks, and California is no exception. Much more attention needs to be given to the nature of the "tracks" in public school curricula, as well as the crucial importance of the junior high school experience, as the Director's Report correctly observes.
- On the other hand, the Asian-American population in the U.S. has been called a "model minority" in terms of high school success, according to a Population Reference Bureau report in October, 1985, indicating the following completion rates:



Because one third of all Asian-Americans live in California, these students represent a significant asset—a minority whose youth could be used as examples for others. California needs to think of ways in which the motivations and achievements of this portion of its youth could be transferred to others. Is it the generalized Asian concern for youth success, and of the role of education in achieving personal goals? How do Asian families inculcate these values in their children? We need to know much more about this process, not only for American minorities, but also for whites, as a majority of white California children will be reared by a single parent by their 18th birthday.

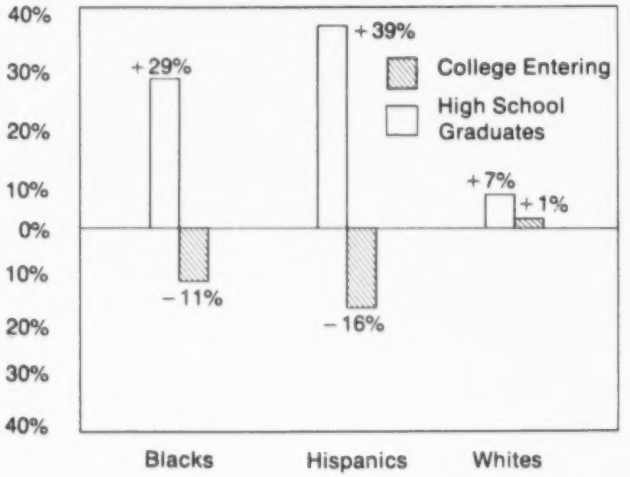
The single factor that distinguishes California's schools is large schools and *large classes*. The only way to lower class size is to hire more teachers. With an expanding elementary school population of great ethnic diversity, more teachers will have to be hired just to "stay even" in terms of class size. This analysis suggests that the most likely consequence of Senate Bill 813 will be a gradual increase in high school graduates capable of college work, with little effect on the graduation rates of the minority and poor populations in the state. In Los Angeles Public Schools, total enrollment is 56,000 in tenth grade and 27,000 in twelfth grade! Twenty-two thousand Hispanics are enrolled in 9th grade, but only 9,000 Hispanics are enrolled in 12th grade. Immigration may be swelling the figures somewhat for the earlier grades, but not by much. Los Angeles enrolls 1/8th of California's 4 million public school students. The situation has reached crisis proportions.

One of the easiest and cheapest remedies is to increase school attendance—if young people go to school every day, their chances of dropping out decline spectacularly. An excellent paper on this topic, *Increasing School Attendance*, was published in February, 1986, by the National School Safety Center in Sacramento. One of the "fringe benefits" of such programs is illustrated by the Rohnert Park Stop and Cite program—as truancy from school went down, daytime burglaries went down by 46%! The economic benefits of school reform are many.

Second, California's ability to "convert" high school students to college students is not great, and the chances are that it will decline in the future. California is reflecting a major national trend in this regard—an increase in minority high school graduates (because they are a rapidly increasing part of the school population), and a rapid decline of the percentage of those graduates who enter college. The chart to the right shows percentage change in the U.S. from 1975 to 1982.

There is a major irony here. During these years, blacks were making progress on the top of the job hierarchy. By 1980, they were 4% of officials and managers, 4.3% of professionals, and 7% of Federal executives. Almost every black person knows some black person who is a lawyer today. Yet, at the very time the doors are opening slightly, minorities are turning away from the college education that is indispensable in moving to the top of the occupational ladder. Is it because of declining certainties of student financial aid? Because the military has worked so successfully on recruiting talented (college eligible) minority high school graduates? Because the bright high school graduate who goes to college loses four years of income and goes into debt "from the top"? No one is certain, but the California experience in this area reflects the national trend in declining minority college enrollment reported by The American Association of State Colleges and Universities in March, 1985.

HIGH SCHOOL GRADUATES AND COLLEGE ENTERING



The situation is especially confounding because by 1980, 68% of working black males were classified as "middle class" in income, and 12% were considered *above* middle-class income levels, according to the Rand Corporation's *Closing the Gap*, published in February, 1986. One assumes that middle-class minorities would certainly extol the virtues of education, and would work hard to ensure their children's success in school. In Los Angeles, 439,000 of the city's 943,000 blacks live in the suburbs, another indicator of middle-class membership. In Oakland, 104,000 of 263,000 blacks are middle class by residence. If this black middle class is to perpetuate itself, its children will have to succeed in the educational system. It may be that middle-class people of any ethnic background cut back on their birth rate.

In California, 13.2% of all public high school graduates in 1983 were eligible for admission to the University of California. But only 3.6% of the black graduates were eligible, and 4.9% of the Hispanic graduates were. Conversely, *26.9%* of Asian graduates were admissable, a very high rate indeed. These numbers are reflected in the entering freshman class for October, 1985, at U.C. Berkeley, which was 26.9% Asian-Americans (largest number 10.8% Chinese), 10.6% Hispanic, 7.8% black, and 47.9% white, indicating that the "minority majority" is already present in higher education as well. My impression is that the Berkeley administration has worked very hard to increase black and Hispanic enrollments, but there simply are not enough coming out of the public schools who are qualified.

The State University system is open to the top 1/3 of high school graduates. The increase in black and Hispanic students in the State University was only proportional to the decreased selectivity at admissions at this level—there was no "net gain" in minority participation. Over half of all Hispanic high school graduates in California had the grades required for admission to the State University, but failed to take the tests necessary to assure their eligibility. This suggests some major problems in terms of guidance and counselling in the high schools of California.

In 1983, 262,160 public and private high school graduates were produced in California. Of these, 18,323 attended the University of California as regular or "special" admits, 23,250 were admitted to the State University, 98,390 attended one of the 106 community colleges, while 8,914 attended private institutions of higher education. Only about 5% of these students went out of state for college, which has been characteristic of California (and Texas) for some years. It is vital to see that 84,000 of these high school graduates—one-third—did not go on to *any* college during the year after high school graduation.

Much of the burden resulting from this diversity is falling on the community colleges, which have had to admit a larger number of poorly prepared students, while simultaneously being pushed to produce a higher number of well-qualified graduates who will transfer and feed the University and State University ranks. Remediation is a major endeavor at all three levels of the higher education system; however, it is clear that such efforts are concentrated in the Community Colleges. These institutions are funded on a "per head" basis, unlike the University of California and State University systems which have a level of appropriation regardless of fluctuations in student enrollment.

Given the fact that many advising and tutoring activities do not even generate credit hours, the "coin of the realm" in state funding formulae, and given that the Community Colleges will be forced to expend even more effort on these activities in the future, they may need some extra form of appropriation to allow some administrative stability, given the complexity of their task. (Some of their students are exceptionally good, as good as any in the system, some are of middle ability, and some of their students are not yet high school graduates, with basic skills of writing and math still to be acquired.) Some improvement in funding has appeared for 1986, but it does not seem proportional to the enormous range of tasks the state has asked them to perform.

At the University of California in 1979-80, about half of all new freshmen were enrolled in remedial writing courses—in all, 16% of all English course enrollments were remedial, and 9% of math enrollments were. At the State University, 14% of math enrollments were remedial and about 8-10% of English enrollments were. In the Community Colleges, 45% of all English enrollments were remedial, and 57% of math enrollments were. There is no reason to believe that since 1980 these figures have diminished, and there is some evidence that remediation is taking more course registrations in 1986.

There seems to be a generalized "leveling down" of the Hispanic students in California higher education—if they are qualified for the University, they go to the State University, if they are eligible for that, many go to Community College. Asian students, on the other hand, "level up," in the sense that they seem to make sure that they enroll at the highest order of institutions for which they are eligible. Even older Asian students are making their way—of the Asian students in their thirties in community colleges in California, 94% did not graduate from a California high school. Presumably most were recent immigrants, and we know that of Asian immigrants to the U.S., about 30% have already completed a college degree of some sort before they arrived in the U.S. They were "trading" their degrees and knowledge by "leveling up" in our system to the highest degree they could.

It would seem that at the point of entry to higher education, many California students are led astray because of doing the wrong things in high school, not being told of entrance requirements, not taking the requisite tests, etc. Many students seem not to be aware of the mechanics of transfer from one institution or level to another. These things are relatively simple and could be corrected without large additions in funding. Information about the mechanics of higher education in California needs to be shared more comprehensively with colleagues in California's public schools.

Third, it is most important to analyze who gets through the system with the appropriate degree. Admitting minorities and poverty students to higher education is of little use unless they have a reasonable chance of graduating. The "revolving door" college is a cynical idea, suggesting that we admit high-risk students only for their money, after which they go back out the door they so recently used for entrance.

Nationally, a little less than half of the entering students in four-year bachelors degree programs graduate in four years. If you give them six years, the percentage goes up to about 60%. And about 70% graduate from *some* institution before seven years is up. But given the fact that almost half of U.S. students in higher education are part-time, and almost half are over 25 (and it may be the same half!) we may have to rethink what is meant by "normal progress toward the degree." Certainly within California's Community Colleges, "normal progress" has a very different meaning than within the University of California.

Because most top-flight institutions like U.C. are more selective, they have a higher percentage of students who graduate "on time" than the U.S. average. But U.C. is not much higher: 60% graduate within five years, 10% more graduate from U.C. later, and another 10% graduate from some other college or university—the overall performance is about at the national average. Given the selectivity of the University, one can wonder about the quality of the record. (One answer comes from the Institutional Functioning Inventory data on Berkeley—Concern for Undergraduate Learning—U.L.—was about as low as one could find. Faculty do not get promoted because a high percentage of their undergraduates graduate.)

The State University is below the U.C. standards for retention to graduation:only 29% graduate within five years, and another 11-14% may graduate later. This puts the State University below the national average in retention to graduation.

Key to the Master Plan's strategy was the transfer function—"late bloomers" who started at State University could transfer to their rightful place at the University of California, and most important, thousands of rough diamonds entering the community colleges would be able to move up through the institutional levels to their rightful place at the State University or University of California. The truth is that the number of highly able students in the community colleges who are capable of such transfers has declined to less than one quarter of the enrollment, at least on certain measures. However, given the diversity in the state's population, this figure may simply represent a new level of cultural disadvantage which will have to be remedied before the Community Colleges and State University can become the "feeder" originally intended.

We are ready to come full circle—**THERE IS NO WAY IN WHICH THE HIGHER EDUCATION SYSTEM IN CALIFORNIA CAN OPERATE INDEPENDENTLY OF THE PUBLIC SCHOOLS.** With great ethnic and economic diversity, the largest classes in the nation, and a decade of declining achievement scores, the schools represent the well from which higher education must drink. This is as true in Iowa as in California. Although Senate Bill 813 represents some heroic efforts on the part of California's leadership to remedy these problems, it will be some years before these improvements can be systematically relied upon to increase the quality of the entry pool into California higher education.

In addition, employers in California should now be able to see that the quality of their entering workforce will be affected by the success of the *entire* California educational system—the colleges and universities cannot be expected to play "catch-up" if public school achievement levels are falling. (Indeed, during the decade during which SAT scores on high school graduates were falling, GRE scores on *college graduates* were falling at least as fast.) Improving higher education while ignoring public schools is now clearly an impossible task—they are indeed all one system. Recent reports like *Excellence for Whom?* by the California Achievement Council point out that tracking in the very early grades of school creates a self-fulfilling prophecy, especially for poor and minority students. It is difficult for later grades to provide flexibility across these tracks, especially for the junior high years, and especially for poor and minority children.

GENERAL CONCLUSIONS

There is at least partial truth to Richard Armour's bit of verse:

> *Leap with joy, be blithe and gay,*
> *Or weep my friends with sorrow;*
> *What California is today,*
> *The rest will be tomorrow.*

Our earlier analysis of the state's general characteristics suggests that California's future will be unusually dependent upon the ability of the state's educational system to develop the trained and flexible workforce needed for the diversity of businesses that represent the state's major economic advantage. In addition, California's future citizens represent a vast diversity of backgrounds and values, and they will need to be assimilated into the state as citizens and voters as well as workers, a job well done in the past by California's educational system.

There has been a decade or more of "deferred maintenance" on California education. A leaky, neglected roof will let water *in*, a neglected educational system allows human beings to leak *out*. Far too many young people will lead diminished lives in California, not because of a lack of talent and skill, but because the educational system is not responsive to them and allows them to "leak" into poverty and unemployment. Because there is no safety net under the schools, youth can be consigned to a life of inadequacy and dependency because of deferred maintenance.

Some encouraging developments in the last several years suggest that improvement can happen. But the improvements are to some extent piecemeal. Here are a few recommendations that might be useful:

1. There needs to be established an independent body that would be responsible for monitoring the entire educational system in California. Pat Callan's *Director's Report of the Postsecondary Education Commission* is a good step in this direction.

2. The educational level most in need of improvement is clearly one we have neglected in this report—pre-school. The biggest "bang for the buck" in terms of educational improvements at low cost in the U.S. is undoubtedly Head Start. With increasing diversity coming in the California population, *every* California four-year-old should have a positive educational experience, mostly through day-care programs that are educational in nature, and through state-generated programs like Head Start to take care of the very large number of eligible children for whom there are no federal funds.

3. The junior high school is an area in which lots of children begin to "leak out" of the system. Serious state attention needs to be given to the junior high school in California.

4. Information about requirements for college entrance is given too late, and too selectively. It seems not to be followed up by proper counselling in the secondary schools. Many young people are not going to college because of lack of information about what is needed. This is the cheapest way of increasing college students.

5. If the transfer function is truly valued by the state, then the state will have to provide the resources to make it happen, and happen successfully. The Community Colleges, and to a lesser degree the State Universities, have not been given the tools to do the job. The diversity within the state suggests that major provisions need to be made for "late bloomers" and for those who overcome cultural barriers to become high performing students.

6. The budget allocation process in Sacramento needs to reflect this sense that there is a single educational system at work, even though funded in segments. An education "Czar" is clearly *not* the solution. Easier communication between the segments, better data on the entire educational system, more joint hearings, some personnel with cross-cutting responsibilities might be a good first step, even within a segmented budgeting process. Gubernatorial and legislative leadership can make this happen.

7. It would be wonderful if there were an easy way to reduce the size of classes in California's public schools. Unfortunately, no such easy route exists. Diversity by race and class will *increase* in California public schools, making smaller classes even more vital in the future. Attracting excellent teachers to the schools will not work if the odds are stacked against them once they get there. In most surveys, salaries are not as vital as control over working conditions; and for most good teachers, the major "working condition" problem is size *and* diversity of classes. The issue seems to have little public visibility in California as an educational crisis, which it surely is. Public awareness might be a good start. To reduce California public school class size to the national average would require an investment of heroic proportions, probably outside the capability of the state's resources. Class size has slowly crept up in California during the decade of neglect. "Deferred maintenance" does come home to roost.

Although these problems are difficult, the odds clearly favor a future in California of increasing economic stability and growth, along with the *potential* for increasing the fulfillment of the individual citizens who represent the state's most important future resource. If in a decade, the middle-class population of California is proportionately black, Hispanic, and Asian-American, then the state's future is assured, as these groups will be a majority of California's citizens in a few short years. The education system can make it happen.

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CALIFORNIA—SUMMARY OF MAJOR POINTS

1. The state is largest in population, and has the most diverse population, both in ethnic background and through immigration—15% of Californians were born in another country. The state's economy is equally diverse, allowing it to ride through economic fluctuations that would swamp many other states.
2. The state also has very high rates of major crime, divorce, abortion and venereal disease.
3. Many children in California are born "at risk"—into poverty, into homes in which no English is spoken, into life with a physical or emotional handicap, into homes without two caring parents.
4. A majority of Californians will be black, Asian-American, Native American and Hispanic shortly after the year 2000. Non-Latino Caucasians are already a minority of elementary school students in California.
5. By 1990, California public schools will increase by half a million students, many of them "at risk." The State will have to work harder just to "stay even" in terms of educational quality.
6. Public school quality, as measured by achievement test scores, has dropped during more than a decade, as have most measures of school funding. Although retention measures are not perfect, California ranks about 40th in retaining its youth population to the level of high school graduation.
7. The quality of California higher education cannot be much higher than the quality of California public schools. The decade of public school neglect is finally catching up with California higher education.
8. Educational reforms of 1982–83, like Senate Bill 813, will begin to address these problems, but major change in the *system* will take a decade to appear. (Improving the senior year of high school leaves eleven crucial years of educational development untouched.)
9. The three levels of California higher education (community college, state university, University of California) are not currently functioning to increase the participation of minority groups in higher education, particularly in terms of the transfer function from one level to the next.
10. The State needs to pay much more attention to the *entire* educational system in the State, and how each level affects the others. Particularly important are pre-school and junior high, as well as the transfer function in higher education. The budgeting process in Sacramento should reflect these system-wide targets.
11. Dealing with California's current teacher shortage will be easier and cheaper than attempting to reduce the size of classes, which are the nation's largest. Given the ethnic and cultural diversity of California's youth, the state should have the *smallest* classes in the nation if equity were to be achieved.
12. It is time for California's business, political, educational and civic leadership to begin looking at California's total educational system, the people served and the results attained. Little is known about the educational system as a whole. The time to find out is clearly now.